

# SOT223 PNP SILICON PLANAR MEDIUM POWER TRANSISTOR

## FZT591A

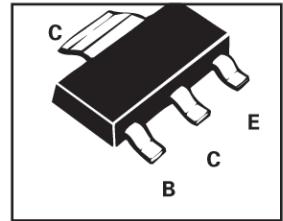
ISSUE 1 - DECEMBER 2001

### FEATURES

Low equivalent on resistance  $R_{CE(sat)} = 350m\ \Omega$  at 1A

PART MARKING DETAIL - FZT591A

COMPLEMENTARY TYPE - FZT491A



### ABSOLUTE MAXIMUM RATINGS.

PARAMETER	SYMBOL	VALUE	UNIT
Collector-Base Voltage	$V_{CBO}$	-40	V
Collector-Emitter Voltage	$V_{CEO}$	-40	V
Emitter-Base Voltage	$V_{EBO}$	-5	V
Peak Pulse Current	$I_{CM}$	-2	A
Continuous Collector Current	$I_C$	-1	A
Base Current	$I_B$	-200	mA
Power Dissipation at $T_{amb}=25^\circ C$	$P_{tot}$	2	W
Operating and Storage Temperature Range	$T_j; T_{stg}$	-55 to +150	$^\circ C$

### ELECTRICAL CHARACTERISTICS (at $T_{amb} = 25^\circ C$ ).

PARAMETER	SYMBOL	MIN.	MAX.	UNI T	CONDITIONS.
Collector-Base Breakdown Voltage	$V_{(BR)CBO}$	-40		V	$I_C = -100\mu A$
Collector-Emitter Breakdown Voltage	$V_{(BR)CEO}$	-40		V	$I_C = -10mA^*$
Emitter-Base Breakdown Voltage	$V_{(BR)EBO}$	-5		V	$I_E = -100\mu A$
Collector Cut-Off Current	$I_{CBO}$		-100	nA	$V_{CB} = -30V$
Emitter Cut-Off Current	$I_{EBO}$		-100	nA	$V_{EB} = -4V$
Collector-Emitter Cut-Off Current	$I_{CES}$		-100	nA	$V_{CES} = -30V$
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$		-0.2 -0.35 -0.5	V	$I_C = -100mA, I_B = -1mA^*$ $I_C = -500mA, I_B = -20mA^*$ $I_C = -1A, I_B = -100mA^*$
Base-Emitter Saturation Voltage	$V_{BE(sat)}$		-1.1	V	$I_C = -1A, I_B = -50mA^*$
Base-Emitter Turn-on Voltage	$V_{BE(on)}$		-1.0	V	$I_C = -1A, V_{CE} = -5V^*$
Static Forward Current Transfer Ratio	$h_{FE}$	300 300 250 160 30	800		$I_C = -1mA,$ $I_C = -100mA^*,$ $I_C = -500mA^*, V_{CE} = -5V$ $I_C = -1A^*,$ $I_C = -2A^*,$
Transition Frequency	$f_T$	150		MHz	$I_C = -50mA, V_{CE} = -10V$ $f = 100MHz$
Output Capacitance	$C_{obo}$		10	pF	$V_{CB} = -10V, f = 1MHz$

\*Measured under pulsed conditions. Pulse width=300 $\mu s$ . Duty cycle  $\leq$  2%

Spice parameter data is available upon request for this device

# FZT591A

## TYPICAL CHARACTERISTICS

